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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 00100.03.0032

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Signature: Christine A Wright

Typed or printed name: Christine A. Wright

Application Number	Filed
10/672,180	September 26, 2003

First Named Inventor: Jeffrey G. Cheng

Art Unit	Examiner
2113	Philip A. Guyton

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- ☑ attorney or agent of record. Registration number 34,414.
- ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

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April 30, 2008
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jeffrey G. Cheng
Serial No.: 10/672,180
Filing Date: September 26, 2003
Confirmation No.: 9865

Examiner: Philip A. Guyton
Art Unit: 2113
Our File No.: 00100.03.0032

Title: **METHOD AND APPARATUS FOR MONITORING AND RESETTING A CO-PROCESSOR**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REMARKS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

Applicants respectfully submit that the Examiner's rejections include clear errors because they ignore claim language and because the cited publications do not teach what is alleged. Claims 1, 2, 5-7, 10, 11, 24, 25, 26, 28-30 and 32-35 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,742,139 to Forsman et al. ("Forsman"). Claims 12 and 13 stand rejected under 35 U.S.C. § 103 (a) a s being unpatentable over Forsman in view of U.S. Application No. 2002/0093505 to Hill et al.

Claim 1 requires, among other things, (1) "a hang detector module operative to detect a hang in the co-processor by detecting a discrepancy between a current state of the co-processors and a current activity of the co-processor" and (2) "a selective processor reset module operative to selectively reset the co-processor without resetting a processor in response to detecting a hang in the co-processor." (Emphasis added). Claims 6 and 24 contain the same or similar limitations. The current Office Action addresses each of claim 1, 6 and 24 together using the same arguments for corresponding features. Accordingly, Applicants' remarks with respect to claim 1 also apply to claims 6 and 24.

The current Office Action alleges that each of these limitations are taught by Forsman. More specifically, the current Office Action cites column 1, lines 35-37 as allegedly teaching that heartbeat signals exchanged between a host processor 202 and a service processor 204 indicate that a service processor is active and working properly. (Office Action, P. 9, ¶5). According to the Office Action, the exchange of heartbeat signals is an indication of a current activity of the processor. (*Id.*). The Office Action states that the "in order for an abnormality to be found, the status of the service processor must be normal." (*Id.*, citing to col. 4, ll. 36-45). The current Office Action further alleges that "[t]hus, a discrepancy exists, and the host resets the service processor and returns it to its original state and activity where it can continue to process heartbeat signals." (*Id.*, citing col. 4, ll. 46-50).

Applicants note that this rejection ignores claim language and improperly suggests that the Forsman teaches what is alleged. For example, in the above-referenced rejection the Examiner appears to state that the exchange of heartbeat signals is an indication of a current activity of the co-processors. The Examiner then cites Column 4, lines 36-45 as allegedly teaching that the service processor must be normal "in order for an abnormality." (Office Action, p. 9). Applicants submit that Column 4, lines 36-45 do not teach what is alleged. For instance, the cited portion of Forsman teaches that following the failure of a host processor 202 to detect a heartbeat signal 206 from a service processor 204, the "host 202 checks the status portion of status/control register 208 … to determine if conditions exist that preempt host 202 from resetting service processor 204." In contrast to what is being alleged by the Office Action, the separate step of checking a status register for a potential preempting condition does not appear to touch upon or teach the alleged "normal status at the service processor". Applicants further note that the above-stated rejection appears to ignore the claimed feature of detecting a

discrepancy between a current state of the co-processor and a current activity of the co-processor. At best, the above rejection merely analogizes the failure to detect a heartbeat signal with a current activity of the co-processor. This alone constitutes clear error.

The Office Action then continues by stating that "in Forsman, the absence of heartbeat signals does not automatically indicate a service processor failure, as the status register may indicate an exceptional condition (column 4, lines 36-45). [T]he current state is actually determined by [the] status of the service processor at the moment that failure of heartbeat signal detection occurs." (Office Action, p. 10). This line of rejection also constitutes clear error because it again ignores claim language. Each of claims 1, 6 and 24 requires selectively resetting the co-processor in response to detecting a hang in the co-processor, where hangs are detected by detecting a discrepancy between a current state of the co-processor and a current activity of the co-processor. Each of these features are ignored by the current Office Action.

For example, column 4, lines 36-45 of Forsman appears to teach checking a status register following the failure of the host processor to detect heartbeat signals. The purpose of checking the status register is "to determine if conditions exist that preempt host 202 from resetting service processor 204. A few examples of this type of status are when service processor 204 is in a special debug mode used by developers, when service processor 204 is in the process or handling a critical event, and when service processor 204 is attempting to recover from a self detected error. If no status exceptions are found, then host processor 202 then proceeds [to commence] a hard reset of service processor 204." (Col. 4, ll. 39-50). To the extent that the failure to detect heartbeat signals indicates a current activity of the service processor and to the extent that the checking of the status registers indicates a current state of the service process (as alleged by the above-cited portion of the rejection), the Office Action ignores that a

reset of the service processor in Forsman only commences when there is no discrepancy between the alleged current activity (i.e., the failure to receive heartbeat signals) and the alleged current status (i.e., i.e., the status registers indicating no preempting conditions). Because Forsman only teaches a reset of the service processor when the alleged current activity and the alleged current status are consistent and because Applicants' claim 1 requires a reset of the co-processor in response to detecting a hang, which is detected by a discrepancy between a current state and a current activity of the co-processor, the current Office Action's rejection must be withdrawn. In this manner the Office Action mischaracterizes Forsman by alleging that Forsman teaches claim features where it actually appears to teach the opposite. For the aforementioned reasons, claims 1, 6, and 24 are believed to be allowable in view of the Office Action's clear error.

Claim 26, 30 and 34 each generally require the detecting of a hang in the co-processor by detecting a discrepancy between a current state of the co-processor and the data in one or more storage elements associated with the co-processor, wherein the data in the one or more storage elements represents a current activity of the co-processor. In response to the detection of such hang in the co-processor, the co-processor is, as in claim 1, 6 and 24, selectively reset. The current Office Action again cites column 4 as teaching each and every limitation of these claims. (*See* Office Action, pp. 5, 10). Notwithstanding that the instant rejection is inconsistent with that of claims 1, 6 and 24 (e.g., Forsman's detection of heartbeat signals or failure thereof now appears to be the basis for allegedly indicating the current state of the co-processor and Forsman's checking of the status registers now appears to be the basis for allegedly indicating the current activity of the co-processor), Applicants note that the same remarks presented above with respect to claim 1, 6 and 24 equally apply to the present rejection. More specifically, Forsman teaches a system that resets a service processor only when the contents of a status

register are *consistent with* the failure to detect heartbeat signals. Contrary to the Office Action's suggestion the service processor in Forsman is not reset in the event of a discrepancy between the two because in such cases this would constitute a condition preempting the reset. Because this again constitutes clear error, the rejection as to claims 26, 30 and 34 should be withdrawn.

Claim 11 requires, among other features, "a halt detection module operative to halt executable instruction communications with the co-processor, in response hang detector module operative to detect a hang in the co-processor". The Office Action cites to a predetermined time-out period that the host must wait for a response from the service processor (e.g., to confirm that the service processor is ready to be reset) before resetting such service processor. (Office Action, p. 11). Applicants note that this constitutes clear error because the claims do not require waiting a predetermined time-out period for a response from the service processor. In contrast, the claims require a module operative to halt executable instruction communications with the co-processor. Because the rejection ignores claim language, this constitutes clear error.

Thus, for the above reasons, the rejections thereto also contain clear error. The rejections to each dependent claim also contains clear error at least to the extent that each such dependent claim incorporates the limitations of the aforementioned independent claims.

Respectfully submitted,

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